tended with fibrils by ingrowth from behind, or by multiplication due to division.

In an early embryonic nerve of moderate size, one finds many hundred fibrils inclosed by a sheath of flattened cells, but with no cells among them. There is no segmentation in the axis-cylinder fibrils corresponding to the cells of the sheath of Schwann.

Union of nerve and muscle fibers takes place before the formation of the sarcolemma. The sheaths of the nerves serve to maintain the stroma in which the axis-cylinder fibrils grow. At first large numbers of fibrils are ensheathed within the main trunks of the nerves, but by proliferation of the sheath cells smaller and smaller bundles are inclosed until finally but a small group of fibrils is inclosed within each sheath of Schwann. Myelination is due to influences exerted by the axis-cylinder fibrils on the surrounding stroma.

BIRTH PALSIES. H. Bochroch (N. Y. Med. Journ., Sept. 19, 1903).

Lesions of the brain such as produce hemiplegias, microcephaly, porencephaly and hydrocephalies are produced by prolonged pressure at birth—frequently from delayed application of forceps, rather than use or abuse of forceps. They occur most frequently among first-born children.

It is probable that the lesion which causes this serious disease is originally one of hemorrhage due to laceration of the veins of the pia mater, just as they enter the longitudinal sinus, or hemorrhage from other sources. Extensive extravasation of blood occurs, usually widely distributed over the convexity of the hemispheres. In some of these cases the writer believes an opening might be made in the side of the head in the parietal region, and the effused blood washed out.

After months and years have elapsed the brain tissue becomes sclerosed; cysts and porencephaly become established, and neither medicine nor surgery can help. Erb's paralysis, or brachial palsy, which results from excessive traction or pressure upon the shoulder, involves as a rule the following muscles: the deltoid, the infraspinatus, the supraspinatus, the teres minor, the biceps, the brachialis anticus and the supinator.

In some cases the fingers and hand are involved. It is often termed the Erb-Duchenne form of palsy, and is characterized by the arm falling motionless to the side of the body; the arm turning inward and extended; flexion of the forearm and raising of the arm impossible, while movements of the hand and fingers are retained. NOYES.

A CONTRIBUTION TO THE SURGERY OF THE BRAIN. William Hudson (Am. Journ. of Med. Sciences, Sept., 1903).

The localization of cerebellar tumors is difficult, and tumors have been found at autopsy which have presented no symptoms in life, or symptoms referable to the other lobe, or symptoms due to hydrocephalus internus. In two cases reported by the writer, one showed positive localized tenderness on deep pressure over the tumor; paralysis of the external rectus muscle of the eye on the side of the tumor; paresis of the seventh nerve; pain in the back of the neck, on the same side. There was weakness on the left side and rotation in walking.

In case two there was positive localized tenderness on deep pressure, paralysis of the external rectus and seventh nerve on the same side as the tumor, but no change from the normal in either side of the patient in sensation, motion, or strength. There was absolute deafness on the tumor side.

There was also a decided rotation of the body from left to right. In both cases the knee jerks were totally absent until after the operation, when they became more lively than normal. This condition is variable in reported cases, due probably to intracranial pressure, or upon degeneration of the posterior columns of the spinal cord. Deep tenderness or localized pain is of the highest value for localization, and is of meningeal origin, due to a primary or secondary affection of the dura mater, which may become sensitive to pressure from a sub-cortical growth some distance away. It is believed that irritative lesions cause a rotation away from the side of the tumor; and destructive lesions toward the side of the tumor.

WM. B. NOYES.

DIE PROGRESSIVE MYOKLONUS-EPILEPSIE (UNVERRICHT'S MYOKLONIE). Von Dr. Herman Lundborg, privatdozent der psychiatrie und neurologie in Upsala (Herausgegeben mit unterstutzung aus Wilhelm Ekman's Universitatsfonds).

Lundborg has adopted Clark and Prout's designation, "Myoclonus-Epilepsy," for this combination disease, but with the felicitous prefix of progressive to indicate its continuous degenerative tendency. This work is the third or fourth monograph the author has given us upon this subject. It embraces a careful digest of all research upon the disease to the present date. The divers opinions of various authors as to the nature and pathology of the affection are critically reviewed. The different types of cases and their stages in the intermittent and progressive forms of the disease are discussed and illustrated. While he lays stress upon the possible primary departure of affection in the cortex as shown by others, the importance of cell changes in the cord and in the muscles themselves are thought to be of great importance. The probably allied pathology of a number of convulsive diseases presenting somewhat similar clinical phases are discussed, such as Huntington's chorea, hystero-epilepsy, electric-chorea (Henoch-Bergerons), paralysis-agitans, myotonia, fibrillary chorea (Moran), myokymia (Schultze), Koschewniskow's epilepsy. An excellent and exhaustive bibliography of all forms of myoclonus is appended.

L. PIERCE CLARK.